

SECRETARY of STATE

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REPORT OF THE SECRETARY OF STATE ON THE EXAMINATION AND EVALUATION OF AN DIRECT RECORDING ELECTRONIC VOTE TALLYING SYSTEM

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In January 2003 Hart InterCivic, Inc. of Layfayette, Colorado requested the review and examination of their system's Ballot Now component under RCW 29.33.041 and 29.33.300, as well as, a review of the revisions made to the previously certified components of their eSlate Direct Recording Electronic Voting System. The Ballot Now system (v1.5.9) is a paper ballot system which can be integrated with Hart InterCivic's eSlate Direct Recording Electronic Voting System. The Hardware components include: the Mobile Ballot Box (MBB), Judges Booth Controller (upgraded to JBC v.01.17), and the eSlate 3000 electronic voting device. The Software that provides the administrative functions of the system is defined in three modules; the Ballot Origination Software System (upgraded to BOSS v.2.9.04), Tally (upgraded to v.2.9.08), and Ballot Now (v1.5.9).

The BOSS software is menu driven and allows the user to describe all aspects of an election. In preparation for ballot counting, the user enters office descriptions, positions, precinct combinations, ballot types, and any statistical information such as registered voter totals. The BOSS software is also used to produce and download the election definition including the precinct specific programming for the entire county onto the MBB.

The Mobile Ballot Box (MBB) is a reusable, portable FLASH memory device used for storing and transporting election information to and from the polling places and Ballot Now computer workstations. The election information includes the election definition for the entire election and the accumulated set of cast ballot images.

Ballot Now is software that features a means for voters, primarily absentee voters, to use paper ballots to vote. It uses the election and ballot definition burned on the MBB to either produce paper ballots "on-demand" at a desktop printer or create files which can be used to print high volumes of ballots at a print shop. The ballots are voted by filling boxes next to the candidate of choice. The voted ballots are scanned using off-the-shelf scanners which produce electronic facsimiles of the original ballots. Ballot Now in conjunction with the ballot definition on the MBB is then used to interpret the digitized ballot images and resolve ambiguities such as over votes, blank ballots, and write-ins.

On Election Day, the voted cast ballot records, also known as cast ballot images, stored on the MBB are transferred to the computer workstation running the Tally software. The Tally software serves as the central accumulator for county wide results. Tally will accumulate results via reading and counting the cast ballot images stored on the PBBs that came from both the Direct Recording Electronic devices used at polling locations and from the Ballot Now paper ballot process.

The eSlate is a poll-site based device using a direct recording electronic voting interface. The eSlate device uses a rotary wheel interface that allows the voter to select their ballot choice and an "enter" button to record their selection. In addition, the eSlate offers a wide variety of interfaces that allow physically-challenged voters to vote independently including: audio feedback, touch pads, and an interface for "sip and puff" devices.

The Judges Booth Controller (JBC) is a poll-site based device that is directly connected to between one and twelve eSlate devices. The JBC provides administrative functions, including; activating the correct ballot for each voter and accumulating the cast ballot images. Cast ballot records are stored in three locations; on the MBB (primary copy), JBC (backup), and the eSlate (original).

The JBC can be initialized as an 'early voting' system with access to all the precincts and ballot styles for an election when any MBB is installed. Alternatively, the JBC can be initialized for a specific polling place with a specified subset of precincts and ballot styles at the time the MBB is installed.

An electronic vote tallying system must meet the following requirements (as set forth in RCW 29.33.320) in order to be approved for use in Washington State:

- (1) It must correctly counts votes on ballots on which the proper number of votes have been marked for any office or issue;
- (2) It must ignore votes marked for any office or issue where more than the allowable number of votes have been marked, but correctly counts the properly voted portions of the ballot;
- (3) It must accumulate a count of the specific number of ballots tallied for each precinct, total votes by candidate for each office, and total votes for and against each issue of the ballot in that precinct;
- (4) It must accommodate rotation of candidates' names on the ballot in accordance with the provisions of RCW 29.30.040;
- (5) It must produce precinct and cumulative totals in printed form; and
- (6) Except for functions or capabilities unique to this state, it must have been tested, certified, and used in at least one other state or election jurisdiction.

On April 28, 2003 a public hearing was held to demonstrate the Hart InterCivic's eSlate Direct Recording Electronic Voting System. Representing the Office of the Secretary of State was David Elliott, Assistant Director of Elections and Paul Miller, Voter Registration and Systems Manager, as well as several SOS staff members. The meeting was also attended by The Honorable Al Brotche, Mason County Auditor, Pat Sykora, Mason County Director of Elections, The Honorable Thad Duvall, Douglas County Auditor, staff members of the Thurston County Auditor's office, The Honorable Bobbie Gagner, Benton County Auditor, staff members of the Benton County Auditor's office, Roger Carpenter, staff member of the

Clark County Auditor's office, and representatives from Hart InterCivic. The vendor made a presentation of the Ballot Now component and a test election was conducted. A review of the DRE devices was also conducted. The vendor answered questions from the Secretary of State staff and the public.

FINDINGS OF THE SECRETARY OF STATE

Upon review of the staff evaluation of the eSlate Direct Recording Electronic Voting System (NASED N03040000021 and 011001-11305) using the eSlate 3000 DRE Precinct device, the presentation by the vendor, the evaluation of the system conducted by the Wyle and Ciber laboratories in 2002 and the results of the tests performed on this system, the Secretary of State finds that the system satisfies the requirements of RCW 29.33.300 when used in the manner described below.

The user county will not use the system's provisional voting features and will continue to provide a paper ballot to voters in situations that call for a special ballot. Special ballots are part of a 'fail-safe' process that allows an individual to cast a ballot in situations where poll-workers are unable to determine the individual's eligibility. The ballot is only counted after election staff is able to determine that the individual is in fact eligible to vote on the ballot contests. The eSlate provides a feature of convenience that allows the ballot to be cast on the eSlate and optionally included in the election results after review by election staff. The test and materials review could not establish that the feature functions in a manner consistent with RCW and state practice.

SPECIAL MANUAL PAPER BALLOT INSPECTION PROCEDURE:

The user county may employ the Ballot Now system as an extension of their manual inspection of absentee ballots, provided, the county meets the requirements of Washington State law by using the following procedures. 'Manual inspection' refers to the process of inspecting absentee ballots as defined in WAC 434-240-225(1) prior to final processing of the ballot (WAC 434-240-225(2)).

The procedures are:

The Ballot Now system may be used as an extension of the manual inspection of absentee ballots if the security safeguards applied to the cast ballot images on the system are consistent with those used to protect the returned physical absentee paper ballots. Access to the Ballot Now system must be controlled. The system must reside on a stand-alone computer (not connected via LAN or modem to any other computer) and must remain in plain view of the staff processing absentee ballots at all times during working hours and under lock and seal after business hours. It is also recommended that the user county keep a record of the batches processed each day when they shut down the Ballot Now system and confirm the number of batches and their status on the Ballot Now system when restarting the system the next work day. It is further recommended that the Mobile Ballot Box (MBB) be stored separately from the Ballot Now system after hours.

The Ballot Now system may be used to "enhance" or interpret the cast ballot images if the procedures applied to ambiguous markings on the images are consistent with those applied to absentee paper ballots under WAC 434-261-075 and WAC 434-261-080. The audit log

created by the Ballot Now system must be preserved. Since that audit log contains the credentials for only one user, the user county must also maintain a log of the date/time and initials of the two or more members of each enhancing team that worked on the system. If a serial number is not printed on the ballot then the enhancing team must also pull the original paper ballot out of the scanned batch and write the batch number and sequence number on the face of the ballot. The auto-resolve feature should be set to allow Ballot Now to automatically resolve under-votes without operator review but both over-votes and blank ballots must be reviewed by the canvassing board or its delegated representatives prior to confirming or overriding Ballot Now's interpretation of the ballot.

SPECIAL IN-PERSON ABSENTEE VOTING PROCEDURE:

The design of the eSlate, and the requirements of Washington State law, necessitate the use of the following procedures on the part of the user county to use the eSlate as an 'in-person absentee voting' system. 'In-person absentee voting' refers to voters who cast a ballot on the eSlate prior to the election date. Conceptually this is the same as a voter picking up and casting an absentee paper ballot at the county elections office prior to an election.

The procedures are:

The system may be used as an 'in-person absentee voting' system if the security safeguards applied to the eSlate are consistent with those used to protect returned absentee ballots. Access to the Judges Booth Controller (JBC) and eSlate must be controlled. The device must remain in plain view of the office at all times during working hours and under lock and seal after business hours. The eSlate voter must sign the same oath an absentee voter does and the user county must maintain a log of all 'in-person absentee' voters with the voters' signatures. The poll books must be marked with an indicator that warns the pollworker not to issue a ballot to a voter who has voted early. It is also recommended that the user county keep a record of the number of votes cast each day when they close the Judges Booth Controller (JBC) and confirm the number of votes on the device when opening the device the next work day. It is further recommended that the Mobile Ballot Box (MBB) and/or eSlate be kept separate from the Judges Booth Controller (JBC) after hours.

CONCLUSION

On this date, the Office of the Secretary of State approves "*The eSlate Voting System, Release 2.1*", submitted by Hart Intercivic, Inc., for purchase or use by County Governments of the State of Washington.

This version of the system consists of:

- *Hardware* version 1.16 , NASED 011001-11305, comprised of:
 - *eSlate 3000*, Precinct Voting Machine (DRE)
 - Judges Ballot Counter (JBC 1000) device,
 - Mobile Ballot Box (MBB); PCMCIA flash memory card
- *Software Version 2.1....*NASED N03040000021-1990 comprised of:
 - Ballot Origination Software System (BOSS); software version 2.9.0.4.
 - TALLY; software version 2.9.08
 - Ballot Now; software version 1.5.9

Under the provisions of RCW 29.33.041, the eSlate Voting System is approved for use in Washington State, as a direct recording electronic vote tabulation system, when used in compliance with the procedures contained in this certification and Washington State law.

It is recommended that the canvassing board of any county using this system adopt written procedures governing these processes.

Certified on this July 7, 2003


SAM REED
Secretary of State